

Ethylene Oxide Usage and Emissions

Sterigenics	Charlotte
Emission Controls:	
Sterilizer	AAT Scrubber
Aerations Rooms	Catalytic Oxidizer
Back Vents	Catalytic Oxidizer

Usage and Emissions:	2019	2018	2017	2016	2015
EtO Usage (lbs)	722,107	696,669	659,965	683,201	630,800
Sterilizer Control Effic. (%)	99.95%	99.95%	99.95%	99.95%	99.95%
Aer. Room Control Effic (%)	99.97%	99.92%	99.26%	99.39%	99.97%
Backvent Effic. (%)	99.96%	99.92%	99.20%	99.36%	99.98%
EO Sterilizer Emissions (lbs)	329	318	301	312	288
EO Aeration Emissions (lbs)	9	22	196	166	8
EO Backvent Emissions (lbs)	3	6	53	43	1
EO Fugitive Emissions (lbs)	361.05	348	330	342	315
EO Accidental Releases (lbs):	5.6	2	0	0	0

TOTAL Stack EO Emissions (lbs)	340.83	345.55	549.62	521.42	296.48
TOTAL Fugitive EO Emissions (lbs)	366.65	350.73	329.98	341.60	315.40

EO Sterilizer Emissions (#) = $0.95 * \text{EO Usage} * (1 - \% \text{control efficiency})$

EO Aeration Emissions (#) = $0.04 * \text{EO Usage} * (1 - \% \text{control efficiency})$

EO Backvent Emissions (#) = $0.01 * \text{EO Usage} * (1 - \% \text{control efficiency})$

EO Fugitive Emissions (#) = $0.0005 * \text{EO Usage}$